

## LISTING OF CLAIMS

This listing of claims will replace all prior versions of claims in the application:

1-2. (canceled)

3 (original) A recombinant nucleic acid that will hybridize under high stringency conditions to a nucleic acid selected from the group consisting of the sequence shown in SEQ ID NOs: 8, 10, 12, 14 and 16 .

4. (original) The nucleic acid of claim 3 comprising DNA having a sequence identical to that shown in the sequences selected from the group consisting of SEQ ID NO: 8, 10, 12, 14 and 16.

5. (original) An expression vector comprising transcriptional and translational regulatory nucleic acid operably linked to the nucleic acid of claim 3 or 4 encoding an Haemophilus adhesion and penetration protein.

6. (original) A host cell transformed with an expression vector of claim 5.

7. (original) A method of producing an Haemophilus adhesion and penetration protein comprising:

a) culturing a host cell transformed with an expressing vector comprising a nucleic acid encoding an Haemophilus adhesion and penetration protein; and

b) expressing said nucleic acid to produce an Haemophilus adhesion and penetration protein.

8-16. (canceled)